

August 3, 2001

Mr. William Grimes
Gartland Foundry Company
330 Grant Street
P.O. Box 1564
Terre Haute, Indiana 47808

Re: 167-14075-00007
Significant Source Modification to:
Part 70 permit No.: T167-5998-00007

Dear Mr. Grimes:

Gartland Foundry was issued Part 70 operating permit T167-5998-00007 on September 27, 2000 for a grey iron foundry. An application to modify the source was received on December 21, 2000. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for rebuilding and reconstruction at the source:

- (a) Casting shakeout, identified as EU570, with a maximum capacity of 8 tons per hour, utilizing a baghouse (BH3) for control, and exhausting to stack SC-4.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by Vigo County Air Pollution Control (VCAPC) and the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

The proposed operating conditions applicable to these emission units are attached to this Source Modification approval. These proposed operating conditions shall be incorporated into the Part 70 operating permit through a Significant Permit Modification which is being processed at the same time in accordance with 326 IAC 2-7-10.5.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter call (812) 462-3433 and ask for Rob Harmon or extension 14.

Sincerely,

George M. Needham
Director
Vigo County Air Pollution Control

Attachments

RKH

cc: Mindy Hahn - IDEM-OAQ, Permit Branch
Winter Bottum - IDEM-OAQ

SECTION D.4

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

1. Sand handling systems including:
 - a. Sand Muller, identified as EU591, with a maximum capacity of 100 tons per hour, and sand conveyor, identified as EU592, using baghouse BH5 for control, and exhausting to stack SC-7.
 - b. Casting shakeout, identified as EU570, with a maximum capacity of 8 tons per hour, using a baghouse (BH3) for control, and exhausting to stack SC-4.
 - c. Mold making process including a mold making muller (EU510), six (6) squeezer mold machines (EU520), four (4) rotolift mold machines (EU521), auto mold machine (EU530), and another auto mold machine (EU531), utilizing no control, and exhausting to SU-INT6/7/8/13.
 - d. One (1) Waste sand handling system, identified as EU760, with a maximum capacity of 2.2 tons per hour of sand, exhausting to stack SU-INT12.
 - e. One (1) Shaker/Sorter unit, identified as EU580, with a maximum capacity of 8.0 tons per hour of metal castings, using baghouse BH5 for control, and exhausting to stack SC-7.
2. One (1) Scrap/Charge Handling operation for the cupola furnace, identified as EU100, with a maximum capacity of 19 tons of metal per hour, and exhausting as fugitive emissions FG-1.
3. One (1) Scrap/Charge Handling operation for the electric induction furnaces, identified as EU120, with a maximum capacity of 19 tons of metal per hour, and exhausting as fugitive emissions FG-1.
4. Casting Finishing:
 - a. One (1) Spin Blast, identified as EU610, with a maximum capacity of 5 tons per hour of metal castings, using baghouse BH2 for control and exhausting to stack SC-2.
 - b. One (1) Tumble Blast, identified as EU620, with a maximum capacity of 5 tons per hour of metal castings, using baghouse BH5 for control and exhausting to stack SC-7.
 - c. One (1) Tumbler, identified as EU630, with a maximum capacity of 1 ton per hour of metal castings using baghouse BH5 for control and exhausting to stack SC-7.
 - d. Four (4) Snag Grinders, identified as EU640, each with a maximum capacity of 2 tons per hour of metal castings, using baghouse BH5 for control and exhausting to stack SC-7.
 - e. Six (6) Finish Grinders, identified as EU650, each with a maximum capacity of 2 tons per hour of metal castings, using baghouse BH5 for control and exhausting to stack SC-7.

5. Core making systems including:
- a. Three (3) Shell Core Machines, identified as EU320, EU321, and EU322 each with a maximum capacity of 1 ton per hour of sand, utilizing no controls and exhausting inside the source;
 - b. Three (3) Isocure Core Machines and one sand mixer, the core machines are identified as EU220, EU221, and EU222 while the mixer is identified as EU210. Each core machine has a maximum capacity of 2 tons per hour of sand, utilizing no control and exhausting inside the source;
 - c. One (1) Oil Core Making Process, identified as EU410, utilizing a mixer and associated core boxes with a maximum capacity of 0.25 tons per hour of sand, utilizing no controls and exhausting inside the source; and
 - d. Core Wash Process, identified as EU730, with a maximum capacity of 1 ton per hour of sand, utilizing no controls and exhausting inside the source.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Particulate Matter Limitation (PM) [326 IAC 6-3-2]

- a. Pursuant to CP 167-V022-00007, issued on July 16, 1997, the particulate matter (PM) emissions from baghouse BH-5, controlling emissions from the sand muller, and sand conveyor, shall be limited to 0.0075 grains per dry standard cubic foot at an air flow rate of 50,000 cubic feet per minute. PM emissions are also limited to 3.21 pounds per hour, and 14.08 tons per year.
- b. Pursuant to OP 07-3321-02-92, issued on January 1, 1992, the particulate matter (PM) emissions from BH3 controlling emissions from the shakeout operation shall be limited to 0.03 grains per dry standard cubic foot at an air flow rate of 22,500 cubic feet per minute, which is equivalent to 5.78 pounds per hour and 25.34 tons per year.

These limits also satisfy the requirements of 326 IAC 2-2, for minor modifications to a major PSD source.

D.4.2 Particulate Matter Limitation (PM) [326 IAC 6-1-2(a)]

The facilities not listed specifically in Condition D.4.1 shall not emit particulate matter (PM) in excess of 0.03 grains per dry standard cubic foot.

D.4.3 Throughput Limitation

The throughput of the casting shakeout system shall not exceed 40,000 tons per 12 consecutive month period, rolled monthly. This limitations makes the requirements of 326 IAC 8-1-6 not applicable.

D.4.3.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.4.4~~5~~ Testing Requirements [326 IAC 2-7-6(1),(6)]

The Permittee is not required to test these facilities by this permit. However, IDEM and VCAPC may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM and VCAPC, compliance with the particulate matter limit specified in Condition D.3~~4~~.1 and D.3~~4~~.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.4.5~~6~~ Particulate Matter (PM)

- (a) The baghouse (BH5) for PM control from the sand muller and sand conveyor shall be in operation at all times when the sand muller and sand conveyor are in operation.
- (b) The baghouse (BH3) for PM control from the casting shakeout shall be in operation at all times when the casting shakeout system is in operation.
- (c) The baghouse (BH2) for PM control from the spin blast shall be in operation at all times when the spin blast is in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.4.6~~7~~ Visible Emissions Notations

- (a) Daily visible emission notations of the ~~three baghouse (BH2, BH3, and BH5)~~ **baghouses BH2 and BH5** exhausts shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) **Visible emission notations of the baghouse BH3 exhaust shall be performed once per shift during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.**
- ~~(b)~~(c) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- ~~(c)~~(d) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- ~~(d)~~(e) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- ~~(e)~~(f) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.4.7~~8~~ Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with sand muller and sand conveyor, at least once per shift when the sand muller and sand conveyor are in operation and when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with casting shakeout, at least once per shift when the casting shakeout system is in operation and when venting to the atmosphere. Unless operated under conditions for which the Compliance

Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the spin blast, at least once per shift when the spin blast is in operation and when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 4.0 and 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instruments used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and Vigo County Air Pollution Control and shall be calibrated at least once every six (6) months.

D.4.8⁹ Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the sand muller and sand conveyor when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

An inspection shall be performed each calender quarter of all bags controlling the casting shakeout when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

An inspection shall be performed each calender quarter of all bags controlling the spin blast when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.4.9¹⁰ Broken Bag or Failure Detection

In the event that bag failure has been observed:

- (a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced.
- (b) Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

~~D.4.40~~¹¹ Record Keeping Requirements

- (a) To document compliance with Condition D.4.5~~6~~, the Permittee shall maintain records of ~~daily~~ ^{required} visible emission notations of the baghouses BH2, BH3 and BH5 stack exhausts.
- (b) To document compliance with Condition D.4.1 and D.4.6~~7~~, the Permittee shall maintain the following:
 - (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:
 - (A) Inlet and outlet differential static pressure; and
 - (B) Cleaning cycle: frequency and differential pressure.
 - (2) Documentation of all response steps implemented, per event .
 - (3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.
 - (4) Quality Assurance/Quality Control (QA/QC) procedures.
 - (5) Operator standard operating procedures (SOP).
 - (6) Manufacturer's specifications or its equivalent.
 - (7) Equipment "troubleshooting" contingency plan.
 - (8) Documentation of the dates vents are redirected.
- (c) To document compliance with Condition D.4.3, the Permittee shall maintain throughput records for the Casting Shakeout system.
- (~~e~~)(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

~~D.4.44~~¹² Reporting Requirements

A summary of the information to document compliance with Condition D.4.3 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, quarterly using the reporting form attached or its equivalent.

A summary of the information to document compliance with Conditions D.4.1, D.4.2 and D.4.6~~7~~ shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, upon request.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
and
VIGO COUNTY AIR POLLUTION CONTROL**

Part 70 Quarterly Report

Source Name: Gartland Foundry Company
Source Address: 330 Grant Street, Terre Haute, Indiana 47802
Mailing Address: PO Box 1564, Terre Haute, Indiana 47808
Part 70 Permit No.: T167-5988-00007
Facility: Casting Shakeout
Parameter: Throughput
Limit: 40,000 tons per 12-month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

**Indiana Department of Environmental Management
Office of Air Quality
and
Vigo County Air Pollution Control**

Addendum to the
Technical Support Document for a Significant Source Modification
to a Part 70 Operating Permit

Source Name: Gartland Foundry Company
Source Location: 330 Grant Street, Terre Haute, Indiana 47802
County: Vigo County
SIC Code: 3321
Approval No.: 167-14075-00007
Permit Reviewer: Rob Harmon

On June 21, 2001, Vigo County Air Pollution Control (VCAPC) had a notice published in the Terre Haute Tribune Star, Terre Haute, Indiana, stating that Gartland Foundry Company had applied for a Significant Source Modification to a Part 70 Operating Permit. The notice also stated that VCAPC proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Upon further review, VCAPC and the OAQ have decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted). The Table Of Contents has been modified to reflect these changes.

1. It has been determined that the Particulate Matter limitations listed in Condition D.4.2 do not accurately reflect the conditions that should apply to this source. Since Gartland Foundry Company is located in Vigo County, and since Vigo County is a listed county under 326 IAC 6-1-7, Gartland Foundry is subject to the requirements of 326 IAC 6-1 instead of 6-3-2 as currently listed. Condition D.4.2 was removed and replaced with the following:

D.4.2 Particulate Matter Limitation (PM) [326 IAC 6-1-2(a)]

The facilities not listed specifically in Condition D.4.1 shall not emit particulate matter (PM) in excess of 0.03 grains per dry standard cubic foot.

2. The condition that was formerly D.4.7 and is now D.4.8 was changed by an Administrative Amendment (167-14263-00007, issued on April 25, 2001). The pressure drop ranges listed in this condition are being upgraded to match that revision.

**Indiana Department of Environmental Management
Office of Air Management
and
Vigo County Air Pollution Control**

**Technical Support Document (TSD) for a Part 70
Significant Source Modification.**

Source Background and Description

Source Name:	Gartland Foundry
Source Location:	330 Grant Street, Terre Haute, Indiana 47802
County:	Vigo County
SIC Code:	3321
Operation Permit No.:	T167-5998-00007
Operation Permit Issuance Date:	September 27, 2000
Significant Source Modification No.:	167-14075-00007
Permit Reviewer:	Rob Harmon - VCAPC

The Office of Air Quality (OAQ) and Vigo County Air Pollution Control (VCAPC) have reviewed a modification application from Gartland Foundry relating to the rebuilding and reconstruction of the following emission units and pollution control devices:

- (a) Casting shakeout, identified as EU570, with a maximum capacity of 8 tons per hour, utilizing a baghouse (BH3) for control, and exhausting to stack SC-4.

History

On December 21, 2000, Gartland Foundry submitted an application to VCAPC and the OAQ requesting to reconstruct and rebuild the casting shakeout system within their existing plant. This reconstruction is intended to accomplish 2 purposes. First, it will restore the system to its normal operation. Second, it will "prevent impending and imminent failure of the existing emission unit" according to the application. The capacity after the reconstruction will be the same as the equipment's rated capacity before (as listed in the Part 70 Permit). Additionally, there is not expected to be any increased utilization elsewhere in the plant due to this reconstruction.

Gartland Foundry was issued a Part 70 permit on September 27, 2000. This is the only previous formal review of the casting shakeout system. It was originally installed prior to 1968, and therefore was not subject to review under Prevention of Significant Deterioration (PSD).

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
SC-4	Casting Shakeout	28'	3.33'	23,500	88EF

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on December 21, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (1 page).

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	112.1
PM-10	78.5
SO ₂	
VOC	42
CO	
NO _x	

Justification for Modification

Gartland Foundry had applied for this approval hoping for it to be determined to be exempt based on a like kind replacement theory. It is Gartland Foundry's opinion that the reconstruction should not even be considered a modification at all. However, IDEM and VCAPC did not come to the same conclusion as a result of the review of the application. Research into the EPA Policy Memos that affect the PSD requirements found 1 constant regarding both routine maintenance and repair and like kind replacement. They can not be applied in cases where the entire emission unit is being replaced or reconstructed. In this case both in the issued Part 70 Permit and the application itself the casting shakeout system has been considered an emission unit. Therefore neither of those exemptions would apply, and the application needs to be processed as a modification.

An analysis was performed to determine if the change was a modification. The definitions under Indiana's PSD rule (326 IAC 2-2-1) Major PSD Modification is defined as “... any physical change in, or change in the method of operation of, a major PSD source that would result in significant net emissions increase of any pollutant ...” It follows that any change that meets the first portion of that definition would be a modification and the ‘significant net emissions increase’ part is used to differentiate between major and minor modifications.

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(4) which requires modifications with PTE above 25 tons per year to undergo review according to the procedures specified in 326 IAC 2-7-10.5(g).

County Attainment Status

The source is located in Vigo County.

Pollutant	Status
PM-10	attainment
SO ₂	maintenance attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Vigo County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Vigo County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	greater than 250
PM-10	greater than 250
SO ₂	less than 100
VOC	greater than 100, less than 250
CO	greater than 250
NO _x	less than 100

- (a) This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is **not** one of the 28 listed source categories.
- (b) These emissions are based upon data in the existing Part 70 TSD.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Casting Shakeout	1.3	0.9		24			
PSD Sig level	25	15		40			
Significant ?	No	No		No			

- (a) This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.
- (b) The VOC emissions are limited to 24 tons/yr, therefore, 326 IAC 8-1-6 requirements do not apply. This limit is equivalent to a throughput limitation of 40,000 tons per year for this system. This will also make the Prevention of Significant Deterioration (PSD) requirements not applicable.
- (c) The PM and PM-10 emissions are limited by requiring the use of a particulate control device (Baghouse BH3) whenever the process is in operation. The listed limited emissions also incorporate the throughput limitation specified in (b) above. This limitation will make the Prevention of Significant Deterioration (PSD) requirements not applicable.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this proposed modification.

State Rule Applicability - Individual Facilities

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

The casting shakeout system is not subject to the requirements of 326 IAC 8-1-6, because the potential to emit from this facility is limited to less than 25 tons per year of VOC emission.

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the casting shakeout system shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The baghouse (BH3) shall be in operation at all times the casting shakeout system is in operation, in order to comply with this limit.

This limitation replaces the existing limitation contained in Condition D.4.1.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM and VCAPC, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

1. The Casting Shakeout has applicable compliance monitoring conditions as specified below:
 - (a) Visible emissions notations of the Casting Shakeout stack exhaust shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.
 - (b) The Permittee shall record the total static pressure drop across the baghouse controlling the Casting Shakeout System, at least once per shift when the Casting Shakeout System is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 4.0 to 6.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.
 - (c) The Permittee shall inspect all of the bags in the baghouse controlling the Casting Shakeout System at least once per quarter. All defective bags shall be replaced.

These monitoring conditions are necessary because the baghouse for the Casting Shakeout because it must operate properly to ensure compliance with 326 IAC 6-3 (Particulate Matter Emissions) and 326 IAC 2-2 (PSD).

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 167-14075-00007.

Appendix A: Emission Calculations

Gartland Foundry
 330 Grant Street, Terre Haute, Indiana 47802
 Sig Source Mod: 167-14075-00007
 Reviewed By: Rob Harmon
 Application Received: December 21, 2000

Project Description:

Gartland Foundry proposes to rebuild/replace their existing shakeout system with a new one.

Calculations:

Throughput 8.0 ton/hr	Potential Throughput 70080 ton/yr			
	PM	PM10	VOC	
Emission Factor	3.2	2.24	1.2	pounds of emission per ton of throughput
Potential to Emit	112.1	78.5	42.0	tons per year (emissions)
PSD Sig Level	25	15	40	tons per year (emissions)
Significant?	Y	Y	Y	before any limitations

Limitations:

First, the emissions are going to all be sent through an existing dust collection system. This can be made an enforceable requirement and that would reduce the emissions of both PM and PM10.

Second, the company has indicated a willingness to accept a throughput limitation, which will result in a reduction in all 3 pollutants being emitted.

Incorporating the material use limitation, followed by the control equipment results in the following:

Throughput 8.0 ton/hr	Limited Throughput 40,000 ton/yr			
	PM	PM10	VOC	
Emission Factor	3.2	2.24	1.2	pounds of emission per ton of throughput
Potential to Emit	64.0	44.8	24.0	tons per year (emissions, before control)
Potential to Emit	1.3	0.9	24.0	tons per year (emissions, after control)
PSD Sig Level	25	15	40	tons per year (emissions)
Significant?	N	N	N	

Limiting the VOC emissions below 25 tons per year also allows the project to be exempt from 326 IAC 8-1-6.